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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,096	02/27/2002	Vishal Anand	US 028017	2846
65913 7590 03/28/2007 NXP, B.V. NXP INTELLECTUAL PROPERTY DEPARTMENT M/S41-SJ 1109 MCKAY DRIVE SAN JOSE, CA 95131			EXAMINER PARK, ILWOO	
			ART UNIT 2182	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	DELIVERY MODE
3 MONTHS			03/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/086,096	Applicant(s) ANAND ET AL.	
	Examiner Ilwoo Park.	Art Unit 2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/6/06.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-8, 13, 14, 16 and 17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-8, 13, 14, 16 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1, 9-12, and 15 are canceled, claims 2-8, 13, and 14 are amended, and claims 16 and 17 are added in response to the last office action. Holden was cited in the last office action. Claims 2-8, 13, 14, 16, and 17 are presented for examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 2-4, 6-8, 13, 14, 16, and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Takahashi et al. [US 2002/0054602 A1].

As to claim 16, Takahashi et al teach a shared memory queue for receiving multiple input data streams and providing a single output data stream, comprising:

an array of data memory locations [shared buffer memory 22 in fig. 2];

input means for selecting an unused data memory locations and routing a data element [“data block written into the shared buffer memory 22 by using an idle address” in paragraph 0051] from one of the input streams to be stored therein, wherein a routing path is provided [fig. 1] for each of the input data streams to each of the data memory locations;

respective pointer queues ["input queue address table 300 for each input line" in paragraph 0046] corresponding to respective ones of said input data streams, wherein when a data element from a given input data stream is stored in a given data memory location, a pointer to the given data memory location is stored ["write address WA obtained from the idle address FIFO 35 is written" in paragraph 0052] in a pointer queue corresponding to the given input data stream;

a readout circuit [figs. 1-2] coupled to the array of the data memory locations; and
output means for causing a next data element of a selected input data stream to be output, by applying to the array of data memory locations a pointer from a pointer queue corresponding to the selected input data stream [e.g., paragraph 0056].

As to claim 17, Takahashi et al teach a method of using pointer queues, an array of data memory locations and a readout circuit to queue and de-queue data from multiple input data streams to providing a single output data stream, comprising:

selecting an unused data memory locations and routing a data element ["data block written into the shared buffer memory 22 by using an idle address" in paragraph 0051] from one of the input streams to be stored therein, wherein a routing path is provided [fig. 1] for each of the input data streams to each of the data memory locations;

when a data element from a given input data stream is stored in a given data memory location, storing ["write address WA obtained from the idle address FIFO 35 is written" in paragraph 0052] a pointer to the given data memory location in a pointer queue ["input queue address table 300 for each input line" in paragraph 0046] corresponding to the given input data stream;

causing a next data element of a selected input data stream to be output, by applying to the array of data memory locations a pointer from a pointer queue corresponding to the selected input data stream [e.g., paragraph 0056].

4. As to claim 2, Takahashi et al teach a first switch [multiplexer 21 in fig. 1] configured to route the data element from said one of input data streams to said unused data memory locations.

5. As to claim 3, Takahashi et al teach a second switch [demultiplexer 23 in fig. 1] configured to route the next data element from the array of data memory locations to the output.

6. As to claim 4, Takahashi et al teach the input means comprises an allocator to allocate an unused data memory locations based on a request from a selected input data-stream for an allocation [paragraph 0052].

7. As to claim 6, Takahashi et al teach the allocator is further configured to receive allocation requests from other input data-streams of the multiple input data-streams, and allocate other unused data memory locations for storing other elements from other input data-streams [paragraphs 0049, 0052].

8. As to claim 7, Takahashi et al teach the allocator is configured to allocate the other unused data memory locations contemporaneously with allocating the data memory locations for storing the element from selected input data-stream [paragraphs 0007, 0052].

9. As to claim 8, Takahashi et al teach the output means is configured to receive requests for outputs corresponding to the other input data-streams, determine

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addresses associated with the other memory-elements, based on the request for the other input data-streams, and provide the other elements as outputs, based on the addresses associated with the other memory-element [paragraphs 0052, 0056].

10. As to claim 13, Takahashi et al teach allocating a plurality of unused data memory locations to a plurality of select input data-streams, storing a received data element from each of the plurality of unused data memory locations, and storing an identification of each of the plurality of previously unused data memory locations corresponding to each of the plurality of select input data-streams [e.g., paragraphs 0051, 0052].

11. As to claim 14, Takahashi et al teach placing the identification in a pointer queue that is associated with the select input data-stream, and causing a next data element to be output includes removing [e.g., "updating the input queue address table 300" in paragraph 0041] the identification from the pointer queue that is associated with the select input-stream.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. [US 2002/0054602 A1] in view of Holden [US 5,583,861].

As to claim 5, though Takahashi et al teach receiving allocation requests [e.g., "header" in paragraph 0039] from other input data-streams of the multiple input data-streams, Takahashi et al do not expressly disclose determining a relative priority of the allocation requests from the other input data-streams and the request from the selected input data-stream and identifying the selected input data-stream based on the relative priority. Holden teaches an allocator is configured to receive allocation requests [header] from other input-streams of the plurality of input-streams, determine a relative priority of the allocation requests from the other input-streams and the request from the select input-stream, and identify the select input-stream, based on the relative priority [col. 2, lines 22-32]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the request in each input data-stream including a priority and utilize the each priority for prioritizing the multiple input data-streams in order to increase flexibility of selecting and forwarding multiple input data-streams

Response to Arguments

14. Applicant's arguments with respect to claims 2-8, 13, 14, 16, and 17 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

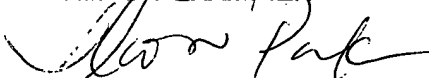
15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ilwoo Park whose telephone number is (571) 272-4155. The examiner can normally be reached on Monday through Friday from 9:00 AM to 5:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ILWOO PARK
PRIMARY EXAMINER


Ilwoo Park

March 21, 2007